DOCUMENT RESUME

ED 473 428 CG 032 196

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TITLE	Youth Illicit Drug Use Prevention: DARE Long-Term Evaluations and Federal Efforts To Identify Effective Programs.
INSTITUTION	General Accounting Office, Washington, DC.
REPORT NO	GAO-03-172R
PUB DATE	2003-01-00
NOTE	22p.
AVAILABLE FROM	For full text: http://www.gao.gov/new.items/d03172r.pdf.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	*Drug Education; *Elementary Education; *Illegal Drug Use; Intermediate Grades; *Prevention; *Program Effectiveness; Program Evaluation
IDENTIFIERS	*Drug Abuse Resistance Education Program

ABSTRACT

The most widely used school-based substance abuse prevention program in the United States is the Drug Abuse Resistance Education (DARE) program, which is funded by a variety of sources, including private, federal, and other public entities. DARE's primary mission is to provide children with the information and skills they need to live drug- and violence-free lives through programs at the elementary school, middle school, and high school levels. According to research literature, concerns have been raised about the effectiveness of the DARE fifth and sixth grade curriculum in preventing illicit drug use among youth. This report contains information on (1) the results of evaluations on the long-term effectiveness of the DARE elementary school curriculum in preventing illicit drug use among children and (2) federal efforts to identify programs that are effective in preventing illicit drug use among children. In brief, the six long-term evaluations of the DARE elementary school curriculum reviewed found no significant differences in illicit drug use between students who received DARE in the fifth or sixth grade (the intervention group) and students who did not (the control group). All of the evaluations suggested that DARE had no statistically significant long-term effect on preventing youth illicit drug use. (GCP)

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ED 473 428

Youth Illicit Drug Use Prevention: DARE Long-Term Evaluations and Federal Efforts to Identify Effective Programs

by

Marjorie E. Kanof

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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United States General Accounting Office
Washington, DC 20548

January 15, 2003

The Honorable Richard J. Durbin
United States Senate

Subject: *Youth Illicit Drug Use Prevention: DARE Long-Term Evaluations and Federal Efforts to Identify Effective Programs*

Dear Senator Durbin:

The use of illicit drugs, particularly marijuana, is a problem among our nation's youth. The adverse effects of illicit drug use play a role in school failure, violence, and antisocial and self-destructive behavior. A recent national survey[1] showed that for 1996 through 2002, more than 30 percent of tenth and twelfth grade students reported using marijuana in the past year. Further, about 20 percent of high school seniors reported using marijuana within the past 30 days. In fiscal year 2000, the federal government spent over $2.1 billion on illicit drug use prevention activities for youth, according to the Office of National Drug Control Policy (ONDCP).

Many programs are designed to help prevent and reduce illicit drug use among youth. Often, these programs also address the use of other substances, such as alcohol and tobacco. Youth drug abuse prevention programs are implemented in school, family, and community settings. School-based prevention programs are the most prevalent because schools provide easy access to children and adolescents. The most widely used school-based substance abuse prevention program in the United States is the Drug Abuse Resistance Education (DARE) program,[2] which is funded by a variety of sources, including private, federal, and other public entities. DARE's primary mission is to provide children with the information and skills they need to live drug- and violence-free lives through programs at the elementary school, middle school, and high school levels. The DARE program is usually introduced to children in the fifth or sixth grade. According to research literature, concerns have been raised about the effectiveness of the DARE fifth and sixth grade curriculum in preventing illicit drug use among youth. As agreed with your staff, this report contains information you requested on (1) the results of evaluations on the long-term effectiveness of the

[1]Lloyd D. Johnston, Patrick M. O'Malley, and Jerald G. Bachman, *Monitoring the Future National Results on Adolescent Drug Use: Overview of Key Findings, 2001*, NIH Publication No. 02-5105 (Bethesda, Md.: National Institute on Drug Abuse, 2002).

[2]The DARE program is administered by DARE America—a nonprofit foundation.

DARE elementary school curriculum in preventing illicit drug use among children and (2) federal efforts to identify programs that are effective in preventing illicit drug use among children.

To identify evaluations on the effectiveness of DARE at preventing illicit drug use among children, we searched social science, business, and education databases, which included the Department of Health and Human Services' (HHS) National Institutes of Health's (NIH) National Library of Medicine, for evaluations of DARE published in professional journals. We identified articles published in the 1990s on six evaluations of the DARE elementary school curriculum that included illicit drug use as an outcome measure and that also met key methodological criteria for our review, such as a long-term evaluation design and the use of intervention and control groups for comparisons. The six long-term evaluations that we discuss in this report were conducted at different times up to 10 years after student participants were initially surveyed. The six evaluations are based on three separate studies in three states. We reviewed each of the six evaluations and summarized the results of our review. We also held discussions with the researchers who conducted the evaluations. We did not independently validate the research designs or verify the results of evaluations on the effectiveness of the DARE program. (Enclosure I contains citations for the articles on evaluations of the DARE elementary school curriculum that we reviewed and enclosure II describes the methodology we used to select the evaluations).

To determine federal efforts to identify programs that are effective in preventing youth illicit drug use, we interviewed federal officials and reviewed documentation on efforts by HHS and the Department of Education (Education) to recognize programs that demonstrate success in reducing illicit drug use among children and adolescents. We did not independently verify the results of prevention programs recognized by the federal agencies. We conducted our work from January through December 2002 in accordance with generally accepted government auditing standards.

In brief, the six long-term evaluations of the DARE elementary school curriculum that we reviewed found no significant differences in illicit drug use between students who received DARE in the fifth or sixth grade (the intervention group) and students who did not (the control group). Three of the evaluations reported that the control groups of students were provided other drug use prevention education. All of the evaluations suggested that DARE had no statistically significant long-term effect on preventing youth illicit drug use. Of the six evaluations we reviewed, five also reported on students' attitudes toward illicit drug use and resistance to peer pressure and found no significant differences between the intervention and control groups over the long term. Two of these evaluations found that the DARE students showed stronger negative attitudes about illicit drug use and improved social skills about illicit drug use about 1 year after receiving the program. These positive effects diminished over time.

HHS and Education have identified several programs that show evidence of effectiveness in preventing youth substance abuse and promoted their use in schools and communities. The Substance Abuse and Mental Health Services Administration (SAMHSA) within HHS and Education use expert panels to review program information that the programs' developers or others submit and rank the programs on several criteria, such as the scientific rigor of their evaluations and the overall usefulness of their findings for preventing substance abuse. Only those programs that produce a consistent pattern of positive results that have been verified scientifically are recognized as effective, according to SAMHSA. HHS has also identified other programs supported by HHS-funded research, that show evidence of effectiveness in preventing substance abuse among youth. Specifically, within NIH, officials from the National Institute on Drug Abuse (NIDA) and scientists who conduct NIDA-funded research identified effective drug use prevention programs that were scientifically evaluated and have demonstrated positive results over time. HHS and Education disseminate descriptions of effective programs to practitioners, schools, and the general public. In addition to the effective programs, each of the agencies also has identified programs that, based on initial results, show promise in preventing substance abuse among youth. However, the outcomes of these programs either have not yet been verified scientifically or have not consistently demonstrated positive results in preventing or reducing substance use, according to the agencies. The agencies also disseminate lists of these programs.

In response to HHS's comments on a draft of this report, we revised the report's title to better reflect the scope of our work. HHS and Education provided additional information about their efforts to identify effective substance abuse prevention programs that we incorporated as appropriate.

Background

A major goal of drug abuse prevention programs is to prevent the use of illicit and nonprescription legal drugs and other substances, such as alcohol and tobacco. Two drug prevention approaches show promise in reducing drug use and strengthening individuals' ability to resist illicit drugs. The psychosocial approach emphasizes drug resistance skills, generic problem solving/decision-making training, and modification of attitudes and normative beliefs that encourage drug use. The comprehensive approach to prevention focuses on the setting in which programs are implemented, which involves the use of schools, families, and the community, working together.[3]

Drug abuse prevention programs are categorized by three different audiences for which they are designed. Generally, the programs are designed for (1) the general population, (2) individuals or subgroups that are at risk for drug abuse because of certain conditions such as being children of drug users, and (3) those individuals who are already experimenting with drugs or who exhibit other risk-related behavior.

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[3]U.S. General Accounting Office, *Drug Control: Observations on Elements of the Federal Drug Control Strategy*, GAO/GGD-97-42 (Washington, D.C.: Mar. 14, 1997).

Established in 1983, DARE operates in about 80 percent of all school districts across the United States and in numerous foreign countries.[4] In addition to the DARE elementary school curriculum, the DARE program also includes middle school and high school curricula that reinforce lessons taught at the elementary school level.

The elementary school curriculum consists of 17 lessons, taught by DARE-trained uniformed police officers, that focus on providing students with decision-making skills, showing them how to resist peer pressure, and teaching alternatives to illicit drug use and violence. The majority of studies evaluating DARE focus on the elementary school curriculum in effect before 1994. According to researchers, in 1994, modest changes were made to the elementary school curriculum, including revisions to the content and sequencing of the DARE lessons.[5]

In fiscal year 2000, the Department of Justice's Bureau of Justice Assistance, which supports various substance abuse prevention programs for youth, provided about $2 million for DARE regional training centers to support the training of new police officers that help deliver the DARE program lessons. Also, in fiscal year 2000, Education provided states about $439 million in grants for schools and communities under the Safe and Drug-Free Schools and Communities Act (SDFSCA) of 1994.[6] Some of the SDFSCA grant funds could have been used to support DARE. However, Education has no estimate of the amount of SDFSCA fiscal year 2000 state grant funds that were used for DARE.

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[4]Data obtained from the DARE America Web site at **http://www.DARE.com** (as of July 30, 2002) and information released by the University of Akron Institute for Health and Social Policy.

[5]The DARE middle and high school program curricula are being revised and will be evaluated, under a Robert Wood Johnson Foundation research grant, by researchers from the University of Akron in cooperation with DARE America Foundation officials. According to the Akron researchers who are conducting the study, the revised middle school curriculum places more emphasis on and devotes more time to three prevention program areas (1) normative beliefs about drug use, (2) consequences of drug and alcohol use, and (3) drug use resistance skills. The curriculum also includes more interaction among students through small group discussions and role-play. The study is experimenting with using police officers as course facilitators rather than as instructors. The purpose of these changes is to improve the effectiveness of DARE. Revisions to the high school curriculum were not complete at the time of our review. The researchers plan to complete their evaluation of the revised DARE curricula in 2006.

[6]Pub. L. No. 103-382, §101, 108 STAT. 3518, 3672-3690 (classified to 20 U.S.C. §§ 7101-7144 (2000)).

Evaluations of the DARE Elementary School Curriculum Show No Significant Differences in Drug Use Between DARE and Non-DARE Students

The six evaluations that we reviewed of the long-term effectiveness of the DARE elementary school curriculum found no statistically significant differences in illicit drug use between students who received DARE lessons in the fifth or sixth grade, referred to as intervention groups, and students who did not—the control groups.[7] Three of the six evaluations reported that the control groups of students that did not receive DARE were provided other drug use prevention education. The six evaluations we reviewed were based on three separate studies in three states—Colorado, Kentucky, and Illinois. Table 1 summarizes the information on the six evaluations that we reviewed. Each of the six evaluations, conducted at intervals ranging from 2 to 10 years after the fifth or sixth grade students were initially surveyed, suggested that DARE had no statistically significant long-term effect on preventing illicit drug use. Five evaluations also reported on students' attitudes about illicit drug use and other nonbehavioral measures and found no significant differences between the DARE and non-DARE students over the long term.

Table 1: Long-Term Evaluations on the Effectiveness of the DARE Elementary School Curriculum in Preventing Illicit Drug Use[a]

Evaluation/date of article	Sample description	Measures	Prevention outcome
Kentucky Studies			
1. Sensation Seeking as a Potential Mediating Variable for School-Based Prevention Intervention: A Two-Year Follow-Up of DARE, 1991 Location: Lexington, Kentucky	The initial sample included a total of 2,071 sixth graders from 31 elementary schools. Twenty-three schools and 1,550 students were assigned to receive the DARE intervention and 8 schools and 521 students were designated control groups that received drug use prevention education provided under a standard health curriculum. The sample size at the 2-year follow-up, when students were in the eighth grade, was 1,207,or about 78 percent of the baseline for the intervention group and 413,or about 79 percent for the control group.	Past year use of marijuana.	No statistically significant differences were observed between the intervention and control schools on students' past year marijuana use 2 years after the intervention.

[7]The studies surveyed individuals about their lifetime, past year, and past month marijuana, alcohol, or cigarette use. They were also asked about their attitudes towards drugs, peer pressure resistance, and self-esteem.

Evaluation/date of article	Sample description	Measures	Prevention outcome
2. The Effectiveness of Drug Abuse Resistance Education (Project DARE): 5-Year Follow-Up, 1996 Location: Lexington, Kentucky	In the 5-year follow-up to the 1991 study, students were surveyed each year during the sixth through tenth grades. The sample size at the 5-year follow-up, when students were in the tenth grade, was 858, or about 55 percent of the baseline for the intervention group and 285, or about 55 percent, for the control group.	Past year use of illicit drugs. Nonbehavioral measures included attitudes towards drugs, peer pressure resistance, and perceived peer substance use.	No statistically significant differences were observed between intervention and control groups on marijuana use 1 year after the intervention and at the 5-year follow-up. Although, significant positive DARE effects were observed during the seventh grade (about 1 year after the intervention) for measures of students' attitudes towards drugs, capability to resist peer pressure, and perceived peer drug use, these positive effects diminished over time and were not significant at the 5-year follow-up.
3. Project DARE: No Effects at 10-Year Follow-Up, 1999 Location: Lexington, Kentucky	Follow-up to the 1991 and 1996 studies. The final sample consisted of 1,002 young adults between the ages of 19 and 21,who were in the original sixth grade sample of both intervention and control groups. Seventy-six percent of the participants had received DARE lessons.	Lifetime, past year, and past month use of marijuana. Nonbehavioral measures included peer pressure resistance and self-esteem.	No statistically significant differences were observed between the intervention and control groups for illicit drug use, peer pressure resistance, and self-esteem at the 10-year follow-up.
Colorado Studies			
4. Three-Year Follow-up of Drug Abuse Resistance Education (DARE), 1996 Location: Colorado Springs, Colorado	The initial sample included 38 elementary schools in Colorado Springs, Colorado—21 schools received the DARE intervention and 17 control group schools did not. The 3-year follow-up sample consisted of 940 ninth grade survey respondents from the initial sample of elementary school students. Excluding invalid responses, the final sample consisted of 849 ninth grade students (497 students in the intervention group and 352 in the control group).	Use of illicit drugs and the delay of experimentation with illicit drugs. Nonbehavioral measures included self- esteem and resistance to peer pressure.	No statistically significant differences were found between the intervention and control groups with regard to illicit drug use, delay of experimentation with illicit drugs, self-esteem, or resistance to peer pressure after 3 years.
5. Long-Term Impact of Drug Abuse Resistance Education (DARE): Results of a 6-Year Follow-Up, 1997 Location: Colorado Springs, Colorado	Follow-up to the 1996 study. The 6-year follow-up sample consisted of 676 twelfth grade survey respondents from the initial sample of elementary school students. Excluding invalid responses, the final sample consisted of 620 twelfth grade students (356 students in the intervention group and 264 students in the control group).	Use of illicit drugs and the delay of experimentation with illicit drugs. Nonbehavioral measures included self-esteem and attitudes toward drug use.	No statistically significant differences were found between the intervention and control groups regarding the use of marijuana and the delay of experimentation with illicit drugs, self esteem, and attitudes toward drug use, at the 6-year follow-up.

Evaluation/date of article	Sample description	Measures	Prevention outcome
Illinois Study			
6. Assessing the Effects of School-Based Drug Education: A Six-Year MultiLevel Analysis of Project DARE, 1998 Location: Chicago, Illinois	A total of 1,798 students from 36 urban, suburban, and rural schools in Illinois were surveyed each year from the sixth through twelfth grade. Eighteen elementary schools received the DARE intervention and the 18 elementary schools in the control group did not.	The study measured past 30-day and any use of illicit drugs. Nonbehavioral measures included attitudes towards drugs, peer pressure resistance, and self-esteem.	No statistically significant differences were observed between the intervention and control groups with regard to recent or any use of illicit drugs 1 year after the intervention and at the 6-year follow-up. The DARE students were more likely to report stronger negative attitudes about drug use and improved social resistance skills immediately after the intervention. However, these positive effects eroded over time.

[a]These evaluations also measured the effects of DARE on other behavioral outcomes such as preventing alcohol and tobacco use.

Source: GAO analysis of six evaluations.

Two of the six evaluations (Lexington, Kentucky, 1996 and Chicago, Illinois, 1998) also reported information on the short-term effects of DARE. These evaluations found no significant differences in illicit drug use between the intervention and control groups within a year after completing the DARE lessons. They also found that DARE students showed stronger negative attitudes about illicit drug use and improved peer pressure resistance skills and self-esteem about illicit drug use about 1 year after the intervention. These positive effects diminished over time.

Federal Agencies' Efforts to Identify Effective Substance Abuse Prevention Programs

HHS and Education have identified several programs that show evidence of effectiveness in preventing or reducing the use of illicit drugs and other substances, such as alcohol and tobacco, among youth. Each agency identifies effective programs to recognize their success and promote their use in schools and communities in the United States. HHS and Education selected many of the effective prevention programs from among those submitted by the program developers for review and recognition. According to HHS and Education officials, the programs they selected through an expert panel process do not include all programs that could potentially be effective in preventing substance use among youth. Other effective programs that HHS identified were selected from those whose development was supported by HHS-funded research.

Specifically, within HHS, SAMHSA identified substance abuse prevention programs that based on rigorous evaluation, consistently demonstrate positive results. SAMHSA created the National Registry of Effective Prevention Programs (NREPP)[8] to recognize many of these programs and help policymakers and those working in the field of substance abuse prevention learn more about science-based prevention programs. Under the NREPP process, teams of scientists who are expert in prevention research, review and assess information, such as evaluation methodologies and evaluation results, on prevention programs. Many of these programs are selected and submitted by the program developers. The programs are scored using established criteria and ranked on the scientific rigor of their evaluation and the overall usefulness of their findings for preventing substance abuse. The criteria that programs are evaluated on include factors such as design and implementation, data collection and analysis, program outcomes, and replication and dissemination capabilities. Only those programs that positively affect the majority of the intended populations and produce a consistent pattern of results are recognized as effective. HHS officials stated that the process of having program developers select their programs for review tends to encourage the submission of those programs that can be tested through conventional, low-cost evaluation procedures but discourages the submission of potentially effective interventions that result in broad changes in school or community activities. As of October 2002, SAMHSA had selected 41 effective programs from among 718 submissions. SAMHSA promotes the use of these programs through dissemination, training, and collaboration activities with other substance abuse prevention partners. Table 2 contains examples of effective substance abuse prevention programs recently identified.

[8]NREPP incorporates the work of SAMHSA, Education, NIH, and the Department of Justice, as well as the work of foundations and other entities.

Table 2: Examples of Effective Substance Abuse Prevention Programs HHS and Education Identified

1. Life Skills Training Program (LST)	LST is a school-based substance abuse prevention program for children ages 10-14. LST is designed to address a wide range of risk and protective factors* to reduce illicit drug use by teaching general personal and social skills in combination with drug resistance skills and normative education.
2 Child Development Project (CDP)	CDP is a school improvement initiative designed to reduce the risk of alcohol and illicit drug use and bolster protective factors among elementary school children.
3. Project ALERT	Project ALERT is a program that is provided to middle school students. Its course content focuses on establishing no-drug use norms, developing reasons not to use illicit drugs, and resisting pro-drug pressures.
4. Strengthening Families Program (SFP)	SFP targets families that are at risk for drug abuse. The multicomponent, family-focused program provides prevention programming for substance-abusing families with 6- to 10-year-old children.
5. Project STAR, known as the Midwestern Prevention Project (MPP)	MPP is a comprehensive, community-based drug abuse prevention program that uses school, mass media, parent education, community organization, and health policy programming to prevent and reduce alcohol, tobacco, and illicit drug abuse among adolescents.

Note: SAMHSA identified all five of the substance abuse prevention programs in 1999. In 2001, Education identified all of the programs except CDP and MPP. In 2002, NIDA identified all the programs except MPP.

*According to NIDA's research-based guide, risk and protective factors encompass psychological, behavioral, family, and social characteristics. Risk factors, which include ineffective parenting, failure in school performance, affiliations with deviant peers, and aggressive behavior in the classroom, are associated with greater potential for drug use. Protective factors, such as strong family and community bonds, success in school performance, and adoption of normative beliefs about drug use, reduce the potential for drug use.

Source: HHS and Education documents.

Also, within HHS, NIDA officials and scientists who conduct NIDA-funded research, identify effective drug abuse prevention programs that have been studied over time and achieved positive results. The development of these programs is supported by NIDA. NIDA publishes a guide on preventing drug use among children and adolescents that describes research-based concepts for developing and implementing effective drug abuse prevention programs and several research-based programs that NIDA and the scientists identify.[9]

Education established the Safe, Disciplined, and Drug-Free Schools Expert Panel to help identify programs effective in preventing and reducing substance abuse and violent behavior among students. The panel consisted of teams of experts in research, evaluation, and prevention programming. The expert panel used a multilevel review process to identify effective programs based on information submitted by entities or individuals applying for program recognition. The programs submitted for review must show evidence of effectiveness in reducing substance use, violent behavior, or other conduct problems for a year or longer based on at least one methodologically sound evaluation. Also, the programs must obtain a certain rating based on other criteria, such as whether the program's content is appropriate for its target population and whether the program provides the necessary information and guidance for replication by others. Education officials stated that the programs identified as effective and designated "exemplary," showed statistically significant differences in outcomes that were sustained for at least 1 year beyond the baseline.

[9]NIDA is having the 2003 edition of its guide reviewed before publication.

The expert panel makes recommendations to the Secretary of Education, who announces those programs recognized as effective. Education began making a list of these programs available to schools and others in 1999.

Education has also developed guidance, referred to as "Principles of Effectiveness," that identifies standards for state and local educational agencies to use in implementing research-based prevention programs. According to Education officials, SDFSCA funds can be used for programs that meet these standards and the effective programs identified by the expert panel process.

HHS and Education also identify programs that show promise in preventing and reducing the use of illicit drugs and other substances among youth. These programs have shown positive initial results that have not yet been verified scientifically or have not consistently demonstrated a positive effect on the prevention or reduction of substance use. Each agency also publishes lists of the promising programs they identify to recognize the programs' contributions, based on initial results, to preventing and reducing the use of illicit drugs, alcohol, and tobacco among youth.

Comments from HHS and Education And Our Response

HHS and Education provided comments on a draft of this report. (See enclosure III and enclosure IV, respectively.) Specifically, HHS commented that the title of the draft report implied that the scope of our work was broader than the report's discussion. We revised the report title to better reflect the content of the report. With regard to the DARE elementary school curriculum that we reviewed, HHS commented that to evaluate DARE on the basis of a portion of the program may be equivalent to arbitrarily evaluating the effects of only 1 year of multiyear interventions of programs, such as Project STAR and Life Skills Training. We limited the scope of our work to reviewing published articles on long-term evaluations of the effectiveness of the DARE elementary school curriculum that included illicit drug use as an outcome measure because of concerns that had been raised about the effectiveness of DARE in preventing illicit drug use and because most of the research has focused on the DARE elementary school fifth and sixth grade curriculum.

HHS also commented that the conclusions drawn in the draft report should not necessarily be applied to the future DARE program and suggested that we may want to incorporate more recent findings from the ongoing evaluation of DARE that were released by the Robert Wood Johnson Foundation. However, information from the ongoing evaluation of DARE that was released by the Robert Wood Johnson Foundation did not contain any interim findings on the effectiveness of the DARE program in preventing illicit drug use among youth. Moreover, according to the University of Akron researchers who are conducting this work, the focus of their study is on revising and evaluating the DARE middle school and high school curricula and not the elementary school curriculum that we discuss in this report. The researchers expect to have the final results of their study in 2006.

Education questioned the accuracy and source of the statement in our draft report that DARE operates in about 80 percent of school districts in the United States. We obtained this information from the DARE America Web site and information released by the University of Akron researchers related to their current evaluation of the DARE middle school and high school curricula. We added these sources of the data to the report. Education also questioned the basis for the estimate in the draft report of SDFSCA funds that the department made available to support DARE in fiscal year 2000. The estimate in the draft report was obtained from ONDCP. ONDCP and Education staff developed the estimate using a formula that assumed a certain percentage of SDFSCA state grant funds could be used to support DARE. In response to Education's comment, we contacted officials in Education's Budget Office and the Office of Elementary and Secondary Education Safe and Drug-Free Schools Program, to discuss the estimate that Education and ONDCP staff developed. According to Education officials, the assumptions that were used to estimate the amount of SDFSCA funds that could be used for DARE were hypothetical. Therefore, we deleted the estimate from our report.

HHS and Education provided additional information about their efforts to help identify effective substance abuse prevention programs. Where appropriate, we made changes to the report to reflect the agencies' comments, including technical changes that HHS provided.

We are sending copies of this report to the Secretary of HHS, the Secretary of Education, the Director of the Office of National Drug Control Policy, and others who are interested. We will also make copies available to others upon request. In addition, the report is available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have questions about this report, please contact me at (202) 512-7119 or James O. McClyde at (202) 512-7152. Darryl W. Joyce and David W. Bieritz made key contributions to this report.

Sincerely yours,

Marjorie Kanof

Marjorie E. Kanof
Director, Health Care—Clinical
and Military Health Care Issues

Enclosures - 4

Articles on Evaluations of the Effectiveness of the DARE Elementary School Curriculum That GAO Reviewed

1. Clayton, Richard, R., Anne M. Cattarelo, and Katherine P. Walden. *"Sensation Seeking as a Potential Mediating Variable for School-Based Prevention Intervention: A Two-Year Follow-Up of DARE." Health Communication* (1991): 229-239.

2. Clayton, Richard, R., Anne M. Cattarelo, and Bryan M. Johnstone. *"The Effectiveness of Drug Abuse Resistance Education (Project DARE): 5-Year Follow-Up Results." Preventive Medicine* Vol. 25, No. 3 (May 1996): 307-318.

3. Dukes, Richard, L., Jodie B. Ullman, and Judith A. Stein. *"Three-Year Follow-Up of Drug Abuse Resistance Education (DARE)." Evaluation Review*, Vol. 20, No. 1 (February 1996): 49-66.

4. Dukes, Richard, L., Judith A. Stein, and Jodie B. Ullman. *"Long-Term Impact of Drug Abuse Resistance Education (DARE): Results of a 6-Year Follow-Up." Evaluation Review*, Vol. 21, No. 4 (August 1997): 483-500.

5. Lynam, Donald, R., Richard Milich and others. *"Project DARE: No Effects At 10-Year Follow-Up." Journal of Consulting and Clinical Psychology* Vol. 67, No. 4 (August 1999): 590-593.

6. Rosenbaum, Dennis, P. and Gordon S. Hanson. *"Assessing the Effects of School-Based Drug Education: A Six-Year MultiLevel Analysis of Project D.A.R.E." Journal of Research in Crime and Delinquency*, Vol. 35, No. 4 (November 1998): 381-412.

Enclosure II

Methodology GAO Used to Select Evaluations of the Effectiveness of the DARE Elementary School Curriculum at Preventing Illicit Drug Use Among Youth

To identify evaluations of the effectiveness of the DARE elementary school curriculum at preventing illicit drug use among children, we searched social science, business, and education databases, which included NIH's National Library of Medicine, within HHS, for evaluations of DARE published in professional journals. The majority of the published articles on evaluations of the effectiveness of DARE focused on the program's fifth and sixth grade elementary school curriculum. We identified 27 articles on evaluations of the DARE elementary school curriculum that included illicit drug use as an outcome measure. Of these articles, we selected for review those evaluations that used at least three of the following four criteria for methodological design: (1) long-term study design (study period of 2 years or longer), (2) intervention and control groups for comparisons, (3) random assignment of study groups, and (4) pretest and post-test or surveys of study participants. These criteria are among the ones suggested by researchers as key components of rigorous experimental research design. Six evaluations met at least three of these criteria (see table 3). The six evaluations were based on three separate studies of the DARE elementary school program in three different states—Colorado, Kentucky, and Illinois.

We reviewed the sample design, research results, and conclusions for each of the six evaluations and summarized the results of our review. We did not independently validate the research design or verify the results of evaluations on the effectiveness of the DARE elementary school curriculum.

Table 3: Six Evaluations of the DARE Elementary School Curriculum GAO Selected For Review

Evaluation/date of article	Period evaluation covered (in years)	Intervention and control groups	Random assignment of study groups	Pretest and posttest of study participants
Sensation Seeking as a Potential Mediating Variable for School-Based Prevention Intervention: A Two-Year Follow-Up of DARE, 1991 Location: Lexington, Kentucky	2	Yes	Yes	Yes
The Effectiveness of Drug Abuse Resistance Education (Project DARE): 5-Year Follow-Up, 1996 Location: Lexington, Kentucky	5	Yes	Yes	Yes
Project DARE: No Effects at 10-Year Follow-Up, 1999 Location: Lexington, Kentucky	10	Yes	Yes	Yes
Three-Year Follow-up of Drug Abuse Resistance Education (DARE), 1996 Location: Colorado Springs, Colorado	3	Yes	*	Yes
Long-Term Impact of Drug Abuse Resistance Education (DARE): Results of a 6-Year Follow-Up, 1997 Location: Colorado Springs, Colorado	6	Yes	*	Yes
Assessing the Effects of School-Based Drug Education: A Six Year MultiLevel Analysis of Project DARE, 1998 Location: Chicago, Illinois	6	Yes	Yes	Yes

*Evaluation did not have initial random assignment of intervention and control groups. Random assignment allows for the development of experimental and control groups that are equivalent on all known and unknown variables. Instead of random assignment, the evaluation included periodic random tests that included checks of students' demographic characteristics such as, age, gender, and ethnicity and students' attitudes toward alcohol, tobacco, and other drugs to ensure equivalency among the groups. No statistically significant differences were found between the two study groups on those variables tested.

Source: GAO analysis of six evaluations

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Enclosure III

Comments from the Department of Health and Human Services

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

Washington, D.C. 20201

OCT 30 2002

Ms. Marjorie E. Kanof
Director, Health Care - Clinical
and Military Health Care Issues
United States General
Accounting Office
Washington, D.C. 20548

Dear Ms. Kanof:

Enclosed are the department's comments on your draft report entitled, "Substance Abuse: Programs to Prevent Illicit Drug Use Among Youth." The comments represent the tentative position of the department and are subject to reevaluation when the final version of this report is received.

The department also provided several technical comments directly to your staff.

The department appreciates the opportunity to comment on this draft report before its publication.

Sincerely,

Janet Rehnquist

Janet Rehnquist
Inspector General

Enclosure

The Office of Inspector General (OIG) is transmitting the department's response to this draft report in our capacity as the department's designated focal point and coordinator for General Accounting Office reports. The OIG has not conducted an independent assessment of these comments and therefore expresses no opinion on them.

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Enclosure III

General Comments of the Department of Health and Human Services on the General Accounting Office's Draft Report, "Substance Abuse: Programs to Prevent Illicit Drug Use Among Youth" (GAO-03-172R)

General Comments

The Department of Health and Human Services (the department) appreciates the opportunity to comment on this draft report. The GAO report entitled "Substance Abuse: Programs to Prevent Illicit Drug Use Among Youth" presents a detailed discussion of the lack of significant findings of the Drug Abuse Resistance Education (DARE) program but only a limited discussion of other effective prevention programs. The department's Substance Abuse and Mental Health Services Administration (SAMHSA) is concerned that the report's title implies that it provides an overall assessment of the effectiveness of substance abuse prevention programs, when it actually provides a comprehensive evaluation of an early iteration of the DARE model and a brief reference to federal efforts to identify programs that are effective in preventing illicit drug use among children.

Therefore, we suggest that either separate reports be developed to reflect the two objectives ("the results of evaluations on the long-term effectiveness of the DARE elementary school core curriculum in preventing illicit drug use among children" and "federal efforts to identify programs that are effective in preventing illicit drug use among children") requested by Congress or that the report be retitled to clearly indicate its scope. In either case, SAMHSA would urge the GAO to expand its discussion of SAMHSA's National Registry of Effective Prevention Programs (NREPP).

The following suggestions to more clearly describe the NRREP program build upon the language already in the GAO Report (heading: *Federal Agencies Identify Effective Substance Abuse Prevention Programs*, text following Table 2):

> Within the department, SAMHSA created NREPP to identify on an ongoing basis substance abuse prevention programs that, based on rigorous evaluation, consistently demonstrate positive results. The NREPP is a key component of a national system that is accessible to all and incorporates not just the work of SAMHSA, but of other federal, state, foundation, and private entities, including the National Institute of Health (NIH), the Department of Justice, and the Department of Education. Teams of scientists who are expert in prevention research use a set of 15 scientifically-rigorous criteria to assess various programs that may be implemented by states and communities across the country. The programs are scored using established criteria and ranked on the scientific rigor of their evaluation and the overall usefulness of their findings for preventing substance abuse. Only those programs that positively affect the majority of the intended populations and produce a consistent pattern of results are recognized as effective. To date, 41 effective model programs and 32 promising programs have been selected from 718 submissions. In addition to enhancing protective factors and minimizing risk, these programs have demonstrated a significant impact on drug and alcohol use (25% average reduction), and may have also demonstrated a

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positive effective effect on other related behaviors including school achievement, prevention and reduction of violence, and enhanced family functioning.

Once programs are identified by NREPP, SAMHSA's National Dissemination Initiative is responsible for promoting these programs through the active dissemination of written materials, a strong Training of Trainers approach, the use of innovative web-based technology, and collaboration with a set of national partners, including the National Association of Elementary School Principals, the National Mental Health Association, and the Community Anti-Drug Coalitions of America. Many of these programs are being implemented through the State Incentive Grant (SIG) Program (over 1,858 SIG-supported programs are science-based), the SAMHSA Substance Abuse Block Grants, and other federal and state funding mechanisms, and by a number of agencies including the Department of Education, the Department of Justice, etc.

With regard to the section of the draft report dealing with the evaluation of the DARE program, it should be clear that the SAMHSA neither supports nor disputes the effectiveness of DARE. SAMHSA's prevention scientists are aware that DARE America currently is testing the effectiveness of a major revision of the DARE program, conducted under the direction of a former official of NIH's National Institute on Drug Abuse (NIDA). This revised DARE program has not yet been submitted for review to the NREPP, and SAMHSA is not in a position to officially comment on the effectiveness of this curriculum.

Also, we offer the following comments about several questionable statements within the draft report on the GAO's assessment of DARE.

1. "The core of the DARE program is its fifth and sixth grade curriculum."

It is accurate to report that the 5th/6th grade curriculum was the first curriculum developed by DARE and that it is the most widely-used component. DARE America, however, does not describe this as a "core" curriculum and advocates that the most effective use of DARE requires sequential use of curricula for elementary school and secondary school.

More importantly, to evaluate DARE on the basis of a portion of the program may be equivalent to arbitrarily evaluating the effects of only one year of the multi-year interventions of Project STAR, Life Skills Training, or other programs. The department has identified "prevention principles" that emphasize the importance of multi year interventions. The NIDA publication *Preventing Drug Use Among Children and Adolescents: A Research-Based Guide* (NIH Publication No. 97-4212), for example, states:

"Prevention programs should be long-term, over the school career with repeat interventions to reinforce the original prevention goals. For example, school-based efforts directed at elementary and middle school students should include booster sessions to help with critical transitions from middle to high school."

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2. "HHS and Education have identified programs that show evidence of effectiveness in preventing or reducing the use of illicit drugs and other substances among youth.... HHS and Education select these programs based on expert panel reviews of research-based evidence of program effectiveness."

Rather than proactively identifying prevention programs, the department and the Department of Education invite the developers of programs to submit programs or curricula for review. To the best of this agency's knowledge, the Department of Education encouraged DARE to complete and test the current revision of the DARE program prior to submission to Education's expert review panel.

The self-selection process generally favors submission of curricula with an easily-defined "dosage" that can be tested through conventional, low-cost evaluation procedures. It tends to discourage consideration of potentially effective interventions involving broad changes in the school or community environment (e.g. changes in the procedures and policies of law enforcement authorities, increased youth participation in structured after school activities, etc.).

3. "The six evaluations that we reviewed of the long-term effectiveness of the DARE elementary school curriculum found no statistically significant differences in illicit drug use between students who received DARE lessons in the fifth or sixth grade, referred to as intervention groups, and students who did not -- the control groups. The six evaluations we reviewed were based on three separate studies in three states."

The studies evaluate the DARE program as implemented in the late 1980s and early 1990s. The program has since been refined and subsequent iterations have been developed. The conclusions that are drawn in the GAO report should not necessarily be applied to the future DARE program. It is our understanding that a report of the evaluation of the revised DARE curriculum is scheduled to be released at the end of October by the Robert Wood Johnson Foundation. The GAO report may want to incorporate these more recent findings into the report's assessment of DARE.

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Enclosure IV

Comments from the Department of Education

UNITED STATES DEPARTMENT OF EDUCATION

THE UNDER SECRETARY

October 29, 2002

Ms. Marjorie E. Kanof
Director, Health Care – Clinical and Military Health
Care Issues
General Accounting Office
441 G Street, N.W.
Washington, DC 20548

Dear Ms. Kanof:

Thank you for the opportunity to review your draft report, "*Substance Abuse Programs to Prevent Illicit Drug Use Among Youth.*" In the introduction of your report to Senator Richard J. Durbin, you state that the report contains information on Federal efforts to identify programs that are effective in preventing illicit drug use among children. We have concerns about the accuracy of some of the information included in the report and regret that we did not have the opportunity to be formally involved in the development of the report.

The U.S. Department of Education (Department) established the Safe, Disciplined and Drug-Free Schools Expert Panel (Expert Panel) to identify exemplary programs that are effective in preventing and reducing substance abuse and violent behavior among students. The discussion in your report about the Expert Panel does not fully describe the Expert Panel process and, we believe, may contribute to misunderstanding about the Expert Panel's role. Specifically, the discussion on page 11 of the draft report omits important aspects of the Expert Panel review process and implies that the programs identified by the Expert Panel process are the only prevention programs that are effective.

The Expert Panel used a multilevel review process comprising teams of experts in research, evaluation, and prevention programming. Submissions were reviewed for evidence of effectiveness based on methodologically sound evaluations, and for evidence of high quality programming, including educational significance and replicability. Programs designated as exemplary showed statistically significant differences in outcomes that were sustained at least one year or longer beyond baseline. We recommend that you revise your discussion to incorporate this information.

In 1998, the Department developed the Principles of Effectiveness to guide State and local educational agencies in their decisions to implement prevention programs based on research. Following the enactment of the No Child Left Behind Act in 2001, State and local educational agencies must use the Principles of Effectiveness to design, implement, and evaluate programs funded under the Safe and Drug-Free Schools and Communities Act (SDFSCA). Because of these requirements, there has been some confusion among grantees concerning the Expert Panel's "list" of exemplary programs. Some grantees mistakenly believe that the programs identified as exemplary are the only programs that can be funded under the SDFSCA. In a letter

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to Governors and Chief State Schools Officers dated May 6, 1999, the Department provided guidance on the Expert Panel process as it related to programs that could be supported with SDFSCA funds. While the Department would expect to accept programs identified by this process as meeting the standard established by the SDFSCA Principles of Effectiveness, the programs identified by this process by no means constitute an official or exhaustive list of programs that meet the standard established by the Principles of Effectiveness, and grantees will continue to have flexibility in selecting prevention programs as long as they meet the standard established in the No Child Left Behind Act. Therefore, we recommend that you revise your discussion to incorporate this information.

We also are concerned about the accuracy of some of the statements about the Drug Abuse Resistance Education (DARE) program contained in the draft report. On page 4 of the report, the auditors state that DARE operates in 80 percent of all the school districts across the United States. You have not provided a source for this information. To our knowledge, there has not been any sound survey to determine exactly how many schools have implemented DARE programs. Therefore, we recommend that you either delete or identify the statistical source of the information.

On page 5 of the report, the auditors state that the Office of National Drug Control Policy (ONDCP) estimates that in FY 2000, the Department made available about $41 million to support DARE activities in schools. We question the basis for this figure. We assume this reference is to the Safe and Drug-Free Schools and Communities Act funds spent under the Governor's Program, because State and local educational agencies are not required to implement DARE activities. For FY 2000, the amount of funds awarded, nationally, to the Governor's program was approximately $86 million. We do not agree that almost 50 percent of the Governor's funds were used to support DARE. Although not required in the current authorization of the SDFSCA, in FY 2000 Governors were required to use not less than 10 percent of funds for Law Enforcement Education Partnership (LEEP) programs. In other words, the SDFSCA only required that $8.6 million in FY 2000 SDFSCA funds be used to support LEEP programs. Further, under the SDFSCA, allowable LEEP programs included, but were not limited to, programs such as Project DARE. We recommend that you either delete the $41 million estimate included in the draft, or provide supporting documentation about the amount of SDFSCA funds spent on DARE activities.

Again, thank you for providing a copy of this draft report for our review. If you have any questions, please feel free to contact William Modzeleski, Director, Safe and Drug-Free Schools Program, at (202) 260-3954.

Sincerely,

Eugene W. Hickok

Eugene W. Hickok

(290165)

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